

**METHOD FOR FABRICATION OF A MOLECULAR FILTER AND APPARATUS
FORMED BY THE SAME**

Abstract of the Disclosure

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The invention is a method for fabricating molecular filters which can separate objects approximately 1 - 5 nm in range, where the filtration size is controlled by using thin films of materials and technologies to form a filtration channel or pore in a middle thin film layer in a multilayered structure. Lithography is used to define two offset arrays of blind holes into the opposing sides of a multi-layer membrane. The blind holes extend across a thin central filtration layer. A selective etch is used to attack the filtration layer to form a communicating channel between the two holes. The only connection between one side of the filter and the other is through the channel in the filter layer, whose thickness, d , determines the largest size object which can traverse the filter.